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Ryszka, K.A.

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Resource Extraction and the Green Paradox: Accounting for Political Economy Issues and Climate Policies in a Heterogeneous World

Karolina Ryszka

The thesis presents research on the intersection of two fields: climate change economics and resource economics.

The focus of two chapters is to analyze the “Green Paradox”, a term denoting unintended adverse effects of climate policies. I discard the common assumption of unified climate policies, analyze instead the effects of unilateral climate policies with the help of theoretical models and illustrate the results using numerical examples and calibrations.

One chapter shows that, in a world with heterogeneous regions, the region with the costlier to extract non-renewable resource (f.ex. oil) benefits from a carbon tax, both environmentally and with regard to its terms of trade. Incorporating monopolistic resource production into the setting results in a regime with two limit-pricing phases, where climate policy tightening does not result in higher initial carbon emissions. Overall emissions, however, might increase and the regulated region's welfare decreases as more resources are sold to the unregulated region.

Whereas two chapters share a global view on resource extraction and resulting climate damages, the focus of the last chapter lies on national determinants of resource extraction and accounts for the fact that most of the world's non-renewable resources are state-owned or state-controlled. I develop a political economy model to examine the resulting non-renewable resource extraction pattern and social welfare loss. A key finding is that the presence of self-interested politicians results in over-extraction of the resource.

After having completed a B.A. in political science at the Free University and a B.Sc. at the Humboldt University in Berlin, Karolina was admitted to the graduate program of the Tinbergen Institute in Amsterdam in 2010. Having successfully completed the research master in economics in 2012, she joined a new research group working on the so called “Green Paradox”, lead by prof. Cees Withagen and prof. Rick van der Ploeg. The book at hand is the result of three years of research and collaboration with her colleagues. Karolina will defend her thesis in April 2016.

Resource Extraction and the Green Paradox Karolina Ryszka

